

**Dr L Uccellini** : Forecasting: past, present and future

A copy of the abstract for the above talk is not available.

**Dr T Davies** : I forecast better forecasts: a numerical modelling perspective

NWP (numerical weather prediction) consists of numerical models of the atmosphere, data assimilation and the use of observations. Developments in the science and numerical techniques together with increased computer power have contributed to increased forecast skill over the last 30 years or so. During the next decade, a new generation of non-hydrostatic mesoscale models will become operational, leading to improvements in the short-range forecasting of local weather elements including precipitation.

**Mr E Carroll** : Adding value - the evolving role of the forecaster

The human contribution to the forecast process is important but has to change in a climate of improving NWP models and continued pressure to reduce the costs of meteorological services. Ways in which it is evolving are discussed with particular reference to grid editing techniques which have been developed in the National Met Centre in Bracknell. These have the advantage of freeing the forecaster from mundane tasks, and allowing him or her to concentrate on applying meteorological skill by directly altering NWP output. The 'change once, use many' philosophy opens up many possibilities for downstream automation, as well as allowing some measure of the value added through verification.

**Ms H Willetts** : Weather for the masses

As recently as the eighties there was little choice of weather forecast available in the media. Over the last couple of decades however the quantity of meteorological data available to the general public has increased dramatically. In today's society where there is an obsession with the acquisition of information in 'real time' there is continued pressure to improve data output. A brief history of weather output will be given along with a review of the current situation. Finally future trends and technology will be discussed and speculation given to the potential of media output in the future. To continue with increasing weather outlets, viewers/listeners will continue to spread across these outlets and it will be the job of the media companies to provide weather information on as many platforms as possible.

**Dr M Roulston** : Better living through meteorology: how weather forecasters can help us make better decisions.

Most companies are exposed to some degree of weather risk. The prediction of anomalous weather should enable many users to make more efficient decisions. The cumulative potential gains are large, not just for large, but rare, extreme weather events, but also for smaller anomalies which occur more frequently. To

be used effectively for decision making, weather forecasts need to provide probabilistic information; at least a prediction of the likely forecast error, but ideally the forecast should assign probabilities to all possible weather outcomes. Such forecasts are a key component in an integrated approach to weather risk management, that includes weather forecasts as well as other risk management tools such as weather derivatives.

**Mr D Marbouty** : Pushing the limit of predictability - what can we expect from weekly, monthly and seasonal forecasts ?

The main new operational developments of the last ten years in weather forecasting have been variational assimilation (4D- Var), ensemble forecasting and the evolution toward a global earth system modelling. What we can expect in the next years are direct consequences of these developments. The capacity to assimilate new types of data, particularly satellite data, within a global earth-system model will allow us to monitor and forecast new types of products. The direct coupling of specific models into the ensemble prediction systems is likely to be the proper way to make full use of the skills of ensemble forecasting. However we should not underestimate the limitations of our models when extending the forecast range.